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EXAMINER

LU, CHARLES EDWARD

ART UNIT	PAPER NUMBER
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2163

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/623,658		SHIN, HYOSEOP	
	Examiner		Art Unit	
	Charles E. Lu		2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 59-86 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 59-86 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/9/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Response to Arguments

1. This Action is in response to the amendment dated 6/9/2006. Claims 59-86 are pending. Of these, claims 82-86 are new. Claims 59-86 are rejected.

2. Amendment to the drawings is noted. Objection to the drawings is withdrawn.

3. Amendment to the title and specification is noted. Objection to the title is maintained. The title as amended is not sufficiently descriptive of the claimed invention. The following title is suggested:

INDEX STRUCTURE FOR TV-ANYTIME FORUM METADATA HAVING
LOCATION INFORMATION FOR DEFINING A MULTI-KEY

4. Amendment to the claims for addressing the claim objection is noted. Objection to claim 65 is withdrawn.

5. Amendment to the claims for addressing the 35 U.S.C. 112, second paragraph rejection for claims 62 and 64 is noted. The 35 U.S.C. 112, second paragraph rejection is withdrawn for claim 62 and maintained for claim 64, detailed below.

6. Remarks and amendment to the claims addressing the 35 U.S.C. 101 rejection are noted. Rejection of claim 77, 80, and 81 is withdrawn in light of Applicant's remarks. Rejection for other claims is maintained, detailed below. Rejection under 35 U.S.C. 101 for the new claims is presented below.

7. Regarding the 35 U.S.C. 103 rejections, Applicant argues that one of ordinary skill in the art would not have referred to Jenkins to modify Evain, because they relate to different storage structures. The examiner respectfully disagrees. First, Jenkins is more than reasonably pertinent to the particular problem with which the applicant was concerned. In this case, it is a problem of creating indexes and locating data. One of ordinary skill in the art would have looked to Jenkins for the use of composite key indexes (i.e., multi-key index). See for example Jenkins, col. 2, ll. 17-38, col. 3, ll. 5-10 cited in a previous Office Action. Furthermore, the examiner recognizes that both Evain and Jenkins are in the same field of endeavor of indexing in a data storage environment. For at least these reasons, one of ordinary skill would have referred to Jenkins to modify Evain.

As to the argument about different storage structures, the examiner notes that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, the combination of Evain and Jenkins would have suggested the use of composite key indexes (i.e., multi key index), as seen below and in a previous Action, at least because Jenkins discloses the use of multiple key indexes in locating data.

In response to the argument that neither Evain nor Jenkins provides an enabling disclosure of how to make the combination, it is further recognized that providing an

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enabling disclosure of how to make a combination is not part of the three basic criteria that must be met for a prima facie case of obviousness.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

All three criteria were met, as discussed in this and a previous Office Action.

The examiner further recognizes that a suggestion, teaching, or motivation to combine does not have to be found explicitly in the prior art, as the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. *In Re Kahn*, 441 F.3d 977, 987-88, 78 USPQ2d 1329, 1136 (Fed. Cir. 2006). In this case, the combined teachings would have suggested the use of composite key indexes (multi key index), as seen below and in a previous Action.

Applicant argues that Evain does not teach or suggest the need for a multi-key. However, the examiner recognizes that the suggestion can come from either the references themselves or the knowledge generally available to one of ordinary skill in the art. In this case, the suggestion comes at least from the references themselves. Evain, for example, states, "a broadcaster may wish to index by title, as well as CRID..." (emphasis added. Sec. 2.3.1). This suggests the use of indexing by two keys (title and CRID), because the index is "by title, as well as CRID". Indexing by two fields is taken to be a multi-key index, and thus Evain suggests the need for a multi-key.

Therefore, the prior art rejection is maintained using the art of record.

Specification

8. The title is objected to because of the following informalities:

The title as amended is not sufficiently descriptive of the claimed invention. The following title is suggested:

INDEX STRUCTURE FOR TV-ANYTIME FORUM METADATA HAVING
LOCATION INFORMATION FOR DEFINING A MULTI-KEY

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 59-76, 79, 82, 83, 85, and 86 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to claim 59, there does not appear to be a useful, concrete, and tangible result in the “locating” as amended. Locating appears to be an abstract idea. The claim should store data, display data, or perform a tangible act.

Claim 69 and claim 79 as amended are rejected for at least the reasons set forth in claim 59.

As to new claims 85 and 86, there does not appear to be a useful, concrete, and tangible result in the “specifying”. Specifying appears to be an abstract idea. The claim should store data, display data, or perform a tangible act.

Claims 60-68, 70-76, 82, and 83 are rejected under 35 U.S.C. 101 because they depend from a rejected parent claim and do not cure the deficiencies of the parent claim.

Art rejection for the above claims is applied in anticipation of Applicant amending the claims to overcome the rejection under 35 U.S.C. 101.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 64 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 64, the parent claim makes no mention of a multi-key included within a fragment. Therefore, in line 3 of claim 64, "the multi-key included within the fragment" lacks antecedent basis.

Art rejection for the above claims is applied as best understood in light of the rejection under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 59-86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evain ("1st Draft of Metadata Specification SP003v1.3," XP002323574), in view of Jenkins Jr. ("Jenkins," U.S. Patent 6,496,830).

As to claim 59, Evain teaches an index structure for locating a fragment of metadata divided into fragments, the index structure contained in a computer readable storage medium (fig. 2, sec. 2.1), and locating a fragment of metadata (fig. 2, also see all code in the document).

Evain does not expressly teach a list of multi-keys, each multi-key corresponding to a combination of fields of the metadata, and location information for defining a multi-key of the list.

However, Evain discusses indexing by two fields (title and CRID, section 2.3.1). Evain further teaches location information for defining a key (section 2.3.2). Jenkins discusses a conventional practice of creating indexes that include composite keys (example with two fields, col. 2, ll. 17-38, col. 3, ll. 5-10). Such an index is a list of multi-keys because the composite key is a combination of fields, like a multi-key (Jenkins, col. 2, ll. 17-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evain with the above teachings, such that the index structure stores and manages a list of multi-keys, each multi-key corresponding to a combination of metadata fields, and location information would be provided to define the keys. The motivation would have been to improve processing of queries involving multiple field constraints, as taught by Jenkins (col. 2, ll. 17-18).

As to claim 60, Evain, as modified by Jenkins, teaches comprising values of the multi key and the identification information on the metadata corresponding to the values of the multi key (see section 2.3.3 – 2.3.4).

As to claim 61, Evain, as modified by Jenkins, teaches wherein the identification information of the metadata comprises identification information on ones of the fragments of the metadata corresponding to the values of the multi-key (the identifier in the key index list identifies the key index corresponding to the value of the identifier, fig. 2, section 2.3.2 table).

As to claim 62, Evain, as modified by Jenkins, teaches wherein the location is expressed as X Path (See syntax table in 2.3.2 and fig. 2, and the description for the table).

As to claim 63, Evain, as modified by Jenkins, teaches wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

As to claim 64, Evain, as modified by Jenkins, teaches wherein the location information comprises location information of a fragment including the multi key and location information of the multi key included within the fragment (see fig. 2 and table in section 2.3.2 of identifiers).

As to claim 65, Evain, as modified by Jenkins, teaches wherein the metadata is metadata as defined by the TV Anytime Forum (e.g., section 2.2).

As to claim 66, Evain, as modified by Jenkins, teaches a sub section including ranges of values of the multi key and the identification information on ones of the fragments of the metadata corresponding to the values of the multi key (see section 2.3.3 – 2.3.4).

Evain, as modified by Jenkins, further teaches a section including representative key values representing the respective ranges of values of the key (also see section 2.3.3 – 2.3.4).

As to claim 67, Evain, as modified by Jenkins, teaches wherein each of the representative key values is a value among the corresponding range of values of the key (see section 2.3.3).

As to claim 68, Evain, as modified by Jenkins, teaches wherein the list includes identification information on the section (fig. 2, key index list has a key_index_identifier), and the section further comprises identification information on the sub section (fig. 2, key index has a sub_index_identifier).

As to claims 69 and 70, Evain teaches an index structure suitable for locating metadata divided into fragments, the index structure contained in a computer readable storage medium (fig. 2, sec. 2.1).

Evain does not expressly teach multi-keys.

However, Evain discusses indexing by two fields (title and CRID, section 2.3.1). Evain further teaches location information for defining a key (section 2.3.2). Jenkins discusses a conventional practice of creating indexes that include composite keys (example with two fields, col. 2, ll. 17-38, col. 3, ll. 5-10). Such an index is a list of multi-keys because the composite key is a combination of fields, like a multi-key (Jenkins, col. 2, ll. 17-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evain with the above teachings, such that the index structure stores and manages a list of multi-keys. The motivation would have been to improve processing of queries involving multiple field constraints, as taught by Jenkins (col. 2, ll. 17-18).

Furthermore as to claim 69, Evain, as modified by Jenkins, teaches of suggests identification information of the metadata corresponding to the values of the multi-keys,

wherein the multi keys correspond to a combination of fields of the metadata (see section 2.3.2).

As to claim 71, Evain, as modified by Jenkins, teaches location information for defining the multi keys (see syntax of a key index list in section 2.3.2, table), wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

As to claim 72, Evain, as modified by Jenkins, teaches wherein the identification information of the metadata comprises identification information of ones of the fragments of the metadata corresponding to the values of the multi keys (the identifier in the key index list identifies the key index corresponding to the value of the identifier, fig. 2, section 2.3.2 table).

As to claim 73, Evain, as modified by Jenkins, teaches wherein for a multi key of the multi keys, the index structure comprises a representative values representing a predetermined ranges of values of the multi key (also see section 2.3.3 – 2.3.4).

As to claim 74, Evain, as modified by Jenkins, teaches wherein for a multi key of the multi keys the index structure further comprises a sub section including ranges of values of the multi key and the identification information on ones of the fragments of the metadata corresponding to the values of the multi key (see section 2.3.3 – 2.3.4).

Evain, as modified by Jenkins, further teaches a section comprising representative key values representing the respective ranges of values of the multi key (also see section 2.3.3 – 2.3.4).

As to claim 75, Evain does not expressly teach wherein with respect to comparison of the values of a multi key in size, the multi key comprises fields of the metadata which are prioritized and the combined fields are compared in sequence starting from a first field having a highest order of priority, wherein the values are compared on an arithmetic basis where the values of the multi key are numerical or ranked in lexicographical order where the values of the multi key are alphabetical.

However, Jenkins teaches wherein with respect to comparison of the values of a multi key in size (lexicographically or numerically), the multi key comprises fields of the metadata (e.g., grade level and student identification, col. 2, ll. 17-38) which are prioritized and the combined fields are compared in sequence (col. 2, ll. 17-38) starting from a first field having a highest order of priority (e.g., first grade level), wherein the values are compared on an arithmetic basis where the values of the multi key are numerical or ranked in lexicographical order where the values of the multi key are alphabetical (col. 2, ll. 18-39, col. 8, ll. 32-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evain and Jenkins with the above teachings, such that wherein with respect to comparison of the values of a multi key in size, the multi key comprises fields of the metadata which are prioritized and the combined fields are compared in sequence starting from a first field having a highest order of priority, wherein the values are compared on an arithmetic basis where the values of the multi key are numerical or ranked in lexicographical order where the values of the multi key

are alphabetical. The motivation would have been to improve processing of queries involving multiple field constraints, as taught by Jenkins (col. 2, ll. 17-18).

As to claim 76, Jenkins in the Evain/Jenkins combination teaches wherein first and second values of the multi key corresponds to $(a_1 \dots a_n)$ and $(b_1 \dots b_n)$ respectively (e.g., two composite keys comprising a grade level and student id as discussed above), and the first and second multi-key values are the same size (equal, therefore one key doesn't sort higher than the other) when there is no field having a different size (col. 8, ll. 32-55).

As to claim 77, Evain teaches the following claimed subject matter:

An index structure for metadata divided into fragments, the index structure contained in a computer readable storage medium (fig. 2, sec. 2.1),

A key index list section comprising a list of keys corresponding to the fields of the metadata (see key index list in fig. 2).

Evain does not expressly teach a list of multi-keys, each multi-key corresponding to a combination of fields of the metadata.

However, Evain discusses indexing by two fields (title and CRID, section 2.3.1). Jenkins discusses a conventional practice of creating indexes that include composite keys (example with two fields, col. 2, ll. 17-38, col. 3, ll. 5-10). Such an index is a list of multi-keys because the composite key is a combination of fields, like a multi-key (Jenkins, col. 2, ll. 17-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evain with the above teachings, such that the

index structure stores and manages a list of multi-keys, each multi-key corresponding to a combination of metadata fields. The motivation would have been to improve processing of queries involving multiple field constraints, as taught by Jenkins (col. 2, ll. 17-18).

Evain, as modified by Jenkins, further teaches a key index section (see fig. 2, key index) and sub-key index section (also see fig. 2, sub key index).

Evain, as modified by Jenkins, teaches wherein for a multi key of the key index list, the sub-key index section comprises ranges of values of the key and identification information on ones of the fragments of the metadata corresponding to the values of the key (see section 2.3.3 – 2.3.4), and wherein the key index section comprises representative values representing the ranges of the multi-key (also see section 2.3.3 – 2.3.4), because in the combination Jenkins allows the use of multi-keys, as discussed above.

As to claim 78, Evain, as modified by Jenkins, teaches wherein the key index list section further comprises location information for defining a multi key (see syntax of a key index list in section 2.3.2, table), wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

As to claim 79, Evain teaches the following claimed subject matter:

Computer readable storage medium containing a data structure for storing an index for a fragment of metadata divided into fragments (fig. 2, sec. 2.1), the index

provided to search the metadata (section 2.3.1), and locating a fragment of metadata (fig. 2, also see all code in the document).

A list of keys corresponding to the fields of the metadata (see key index list in fig. 2) and location information for defining the multi-key (see section 2.3.2).

Evain does not expressly teach a list of multi-keys, and location information for defining the multi-key of the list.

However, Evain discusses indexing by two fields (title and CRID, section 2.3.1). Jenkins discusses a conventional practice of creating indexes that include composite keys (example with two fields, col. 2, ll. 17-38, col. 3, ll. 5-10). Such an index is a list of multi-keys because the composite key is a combination of fields, like a multi-key (Jenkins, col. 2, ll. 17-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evain with the above teachings, such that the index structure stores and manages a list of multi-keys, corresponding to fields of metadata, and the location information would define multi-keys. The motivation would have been to improve processing of queries involving multiple field constraints, as taught by Jenkins (col. 2, ll. 17-18).

As to claim 80, Evain teaches the following claimed subject matter:

Computer readable storage medium containing a data structure for storing an index for metadata divided into fragments (fig. 2, sec. 2.1), the index provided to search the metadata (section 2.3.1), the data structure comprising:

Values of keys (fig. 2, section 2.3.1-2.3.2).

Evain does not expressly teach multi-keys.

However, Evain discusses indexing by two fields (title and CRID, section 2.3.1). Jenkins discusses a conventional practice of creating indexes that include composite keys (example with two fields, col. 2, ll. 17-38, col. 3, ll. 5-10). Such an index is a list of multi-keys because the composite key is a combination of fields, like a multi-key (Jenkins, col. 2, ll. 17-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evain with the above teachings, such that the index structure stores and manages a list of multi-keys. The motivation would have been to improve processing of queries involving multiple field constraints, as taught by Jenkins (col. 2, ll. 17-18).

Evain, as modified by Jenkins, teaches identification information on the metadata corresponding to the values of the multi keys (identifiers, again see fig. 2, and section 2.3.2 table), because in the combination Jenkins allows the use of multi-keys, as discussed above.

As to claim 81, Evain teaches the following claimed subject matter:

Computer readable storage medium containing a data structure for storing an index for metadata divided into fragments (fig. 2, sec. 2.1), the index provided to search the metadata (section 2.3.1), the data structure comprising:

A key index list section comprising a list of keys corresponding to the fields of the metadata (see key index list in fig. 2).

Evain does not expressly teach a list of multi-keys, each multi-key corresponding to a combination of fields of the metadata.

However, Evain discusses indexing by two fields (title and CRID, section 2.3.1). Jenkins discusses a conventional practice of creating indexes that include composite keys (example with two fields, col. 2, ll. 17-38, col. 3, ll. 5-10). Such an index is a list of multi-keys because the composite key is a combination of fields, like a multi-key (Jenkins, col. 2, ll. 17-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evain with the above teachings, such that the index structure stores and manages a list of multi-keys, each multi-key corresponding to a combination of metadata fields. The motivation would have been to improve processing of queries involving multiple field constraints, as taught by Jenkins (col. 2, ll. 17-18).

Evain, as modified by Jenkins, further teaches a key index section (see fig. 2, key index) and sub-key index section (also see fig. 2, sub key index).

Evain, as modified by Jenkins, teaches wherein for a multi key of the key index list, the sub-key index section comprises ranges of values of the key and identification information on ones of the fragments of the metadata corresponding to the values of the key (see section 2.3.3 – 2.3.4), and wherein the key index section comprises representative values representing the ranges of the multi-key (also see section 2.3.3 – 2.3.4), because in the combination Jenkins allows the use of multi-keys, as discussed above.

As to claims 82-84, Evain, as modified by Jenkins, teaches or suggests wherein the multi key is comprised of a plurality of attributes of the fragment of metadata. See fig. 2 “fragment” and code in Sec. 2.3.2.

Claims 85 and 86 are drawn to substantially the same invention as claim 59, addressed above. Claims 85 and 86 are rejected based on the same reasoning as claim 59. It is noted for claims 85 and 86 that “attributes” and “elements” are met in the same way by Evain (see fig. 2, Sec. 2.3.2), as modified by Jenkins. As to the “specifying”, Evain has to specify the location of data in order to locate the data.

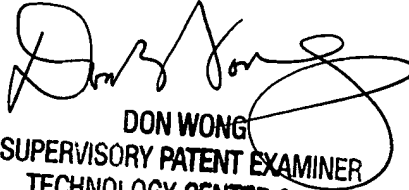
Conclusion

Applicant's arguments were fully considered but were not persuasive. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Lu whose telephone number is (571) 272-8594. The examiner can normally be reached on 8:30 - 5:00; M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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TECHNOLOGY CENTER 2100

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Assistant Examiner
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8/9/2006